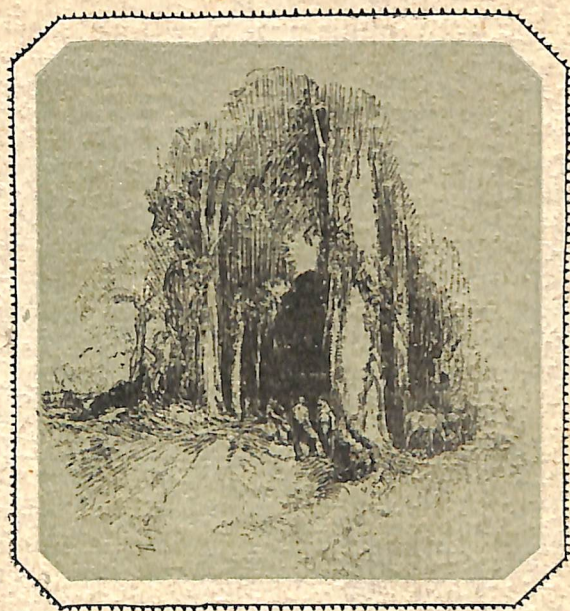


AUSTRALIAN TIMBERS



Published by
FARMER & COMPANY, LIMITED,
SYDNEY, NEW SOUTH WALES,
on the occasion of
THE EXHIBITION OF AUSTRALIAN TIMBERS
organised by Farmer's & held in the Company's
Exhibition Hall.

Officially opened by His Excellency, the
Governor General of the Commonwealth,
Lord Forster, P.C., G.C.M.G.

November 22nd 1922



Spotted Gum (*Eucalyptus maculata*, Hook, f.)

girth 17 ft., barrel 45 ft.



Mountain Ash (*Eucalyptus obliqua* L. Reitt)



REAFFORESTATION ON THE MURRAY:-

Red gum forest—advanced sapling growth, after thinning.

AUSTRALIAN TIMBERS.

Published on the occasion of

THE TIMBER EXHIBITION

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Officially Opened

by His Excellency the Governor-General
LORD FORSTER, P.C., G.C.M.G.

November 22nd, 1922.

The Directors of
Farmer & Company, Limited,

desire to record their appreciation of the valuable assistance in the compilation of the statistics contained in this brochure, and in the assembling of the exhibits, afforded them by the following gentlemen :—

Chief Commissioner, Forestry Commission, N.S.W.
Forest Commissioners of Victoria.

Director of Forests, Queensland Forest Service.

Conservator of Forests, Western Australia.

Conservator of Forests, Forestry Department, Tasmania.

Curator, Technological Museum, Sydney.





FOREWORD



It is a palpable reflection upon Australia's position as a primary producer that timber, the natural fruit and increase of the soil, should have to be imported every year in increasing quantities.

Vast areas of softwood—which figures so prominently in the annual imports—have been denuded by our predecessors, and the present generation blindly follows their example instead of cultivating trees to remedy the loss. Even the national supply of hardwood, great though it may be, has not a Phoenix-like immortality, and is being diminished day by day.

Australia's forest wealth is in danger—imperilled by ignorance, carelessness, and wanton destruction. Timber enters so largely, both directly and in a thousand indirect ways, into the life of the community, that the question is of pressing importance.

Money, be it remembered, is powerless to buy a fully grown tree, beautiful with the dignity and majesty that come with age alone. A season can produce a crop of cereals, a clip of wool; a century is often spanned in the creation of a tree.

The inroads made upon our birthright must be countered by planting proportioned to the loss by consumption and waste. Shall we rob posterity to enrich ourselves, or shall national interest be aroused to insist upon the conservation and extension of this source of wealth?

🍷 🍷 🍷 AUSTRALIAN TIMBERS

The forester and the agriculturist have many points in common. They are both primary producers, for timber is a primary product no less than wheat or wool, and as such they provide the raw materials on which other industries depend. Again, they have many points wherein they are mutually dependent, and this mutual interdependence has been foreseen and provided for by Nature.

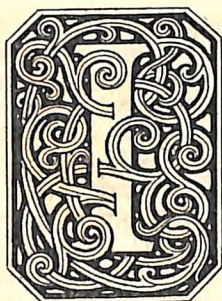
In Western Australia there is under survey for settlement purposes a forest of 92,000 acres, the timber in which has an export value of £21,187,000, or £230 per acre. If the same land under wheat produced 20 bushels an acre at an export value of 5s. per bushel, it would take about fifty years to amass the value of the timber standing in this superb forest. And this area is to be cleared for settlement purposes, regardless of the fact that there must be less heavily timbered districts in the almost illimitable area of Western Australia.

A net profit of nearly £300 an acre was made from a plantation of *pinus insignis*, planted in South Australia 36 years ago. If 500,000 acres (of softwood or hardwood) were now planted in New South Wales, the profits in 36 years would pay off the present State debt. If the Federal Government planted 1,500,000 acres now, the profits, in the same period, would pay off the present debt of the Commonwealth.

A nation which misuses its forest wealth is as a spendthrift living on his capital. Settling day soon comes—when repentance is too late.



CINDERELLA OF PRIMARY INDUSTRIES

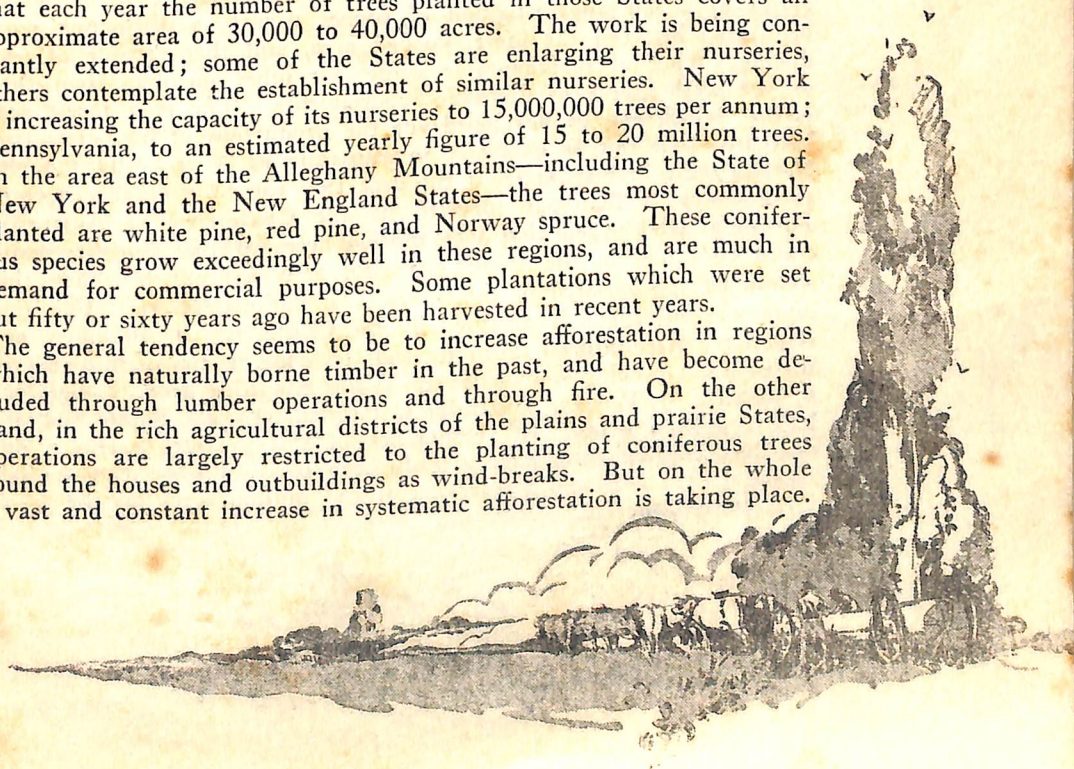


IN the United States of America, afforestation is in the hands of the Federal Government, the State Governments, and private owners of land. The Federal authorities have been carrying on systematic operations for some sixteen years, sowing or planting in that period an area of public land aggregating 175,000 acres. It is intended to continue the work at the rate of 5,000 to 10,000 acres annually, but progress is entirely dependent upon the amount of the financial appropriation made available.

The chief trees planted belong to the more important indigenous species, such as Douglas fir, western white pine, western yellow pine, and Engelmann's spruce, which are native to the western portion of the United States, wherein are situated most of the nationally-owned forest-reserve lands. Certain other trees have been planted on a small scale, mainly for experimental purposes. In most cases about 700 trees are set out per acre, all having been grown in nurseries maintained by the Federal Government.

Some thirteen of the eastern States now maintain nurseries producing thirty or forty million young trees annually, which are available to residents in those States either free or at cost. The net result is that each year the number of trees planted in those States covers an approximate area of 30,000 to 40,000 acres. The work is being constantly extended; some of the States are enlarging their nurseries, others contemplate the establishment of similar nurseries. New York is increasing the capacity of its nurseries to 15,000,000 trees per annum; Pennsylvania, to an estimated yearly figure of 15 to 20 million trees. In the area east of the Alleghany Mountains—including the State of New York and the New England States—the trees most commonly planted are white pine, red pine, and Norway spruce. These coniferous species grow exceedingly well in these regions, and are much in demand for commercial purposes. Some plantations which were set out fifty or sixty years ago have been harvested in recent years.

The general tendency seems to be to increase afforestation in regions which have naturally borne timber in the past, and have become denuded through lumber operations and through fire. On the other hand, in the rich agricultural districts of the plains and prairie States, operations are largely restricted to the planting of coniferous trees round the houses and outbuildings as wind-breaks. But on the whole a vast and constant increase in systematic afforestation is taking place.





AUSTRALIAN FORESTS ARE



COMPARED with its vast territory Australia is a sparsely timbered country, but the forests it possesses amply make up for their limited extent by the exceptional value of the products they yield. The predominating trees are Eucalypts—a family common to the Antipodes alone—which produce a hardwood timber not excelled for strength, durability and constructional use, by any other timbers of the world. Amongst a variety of other species to be found in Australian forests, are numerous trees yielding timber of fine grain and great beauty, suitable for furniture, cabinet ware and ornamental work.

In the words of one authority Australia possesses in its forests “a unique asset worthy of the highest care;” and it is rather a reflection on our forethought as a people that we are only now beginning to realise this truth, for certainly more than half the original forest wealth of the country has been destroyed in the course of the development of the land and the extension of land settlement.

The Forest Area

Various estimates, ranging from 66 to 92 million acres, have been made as to the extent of forest that still remains; but in order to arrive at a fair approximation of timber wealth, a distinction must be drawn between the mere wooded area, and that capable of producing timber of merchantable value for other purposes than fuel, or the most simple of domestic requirements. The true forest area is that which can be developed for the production of high-class timber, and it is not as extensive in Australia as is generally thought. Probably the best estimate of the area that can be profitably devoted to Forestry is that put forward by the Conference of Australian Foresters, who urged that $24\frac{1}{2}$ million acres of real Forestry value could be found in the Commonwealth, and that not less than that should be appropriated in the interests of national safety. This estimate was subsequently accepted by the Conference of Premiers, and steps have already been taken towards securing it, the quotas adopted for each State being:—New South Wales 8 million acres, Queensland 6, Victoria $5\frac{1}{2}$, Western Australia 3, Tasmania $1\frac{1}{2}$, and South Australia half a million acres. In furtherance of this project, seventeen and one-third million acres have already been reserved towards the establishment of a National forest area of $24\frac{1}{2}$ million acres for the whole Commonwealth.



A UNIQUE, VALUABLE ASSET



Australian forests may be grouped under three principal types. In order of importance the first and the most extensive are the "Open hardwood forests" (mainly Eucalypts) occurring in the regions of fair to good rainfall. The next in importance are the "Jungle or Rain forests" found in the sub-tropical regions of high rainfall; while the "Scrub forests" which occur in the interior regions of moderate rainfall are generally considered to be of least economic value. The hardwood forests furnish the bulk of the timber used for general building and construction; the jungle forests supply timber for interior work, and woods of fine grain; and the scrub forests meet many of the demands for pastoral occupation, interior settlement, and mining.

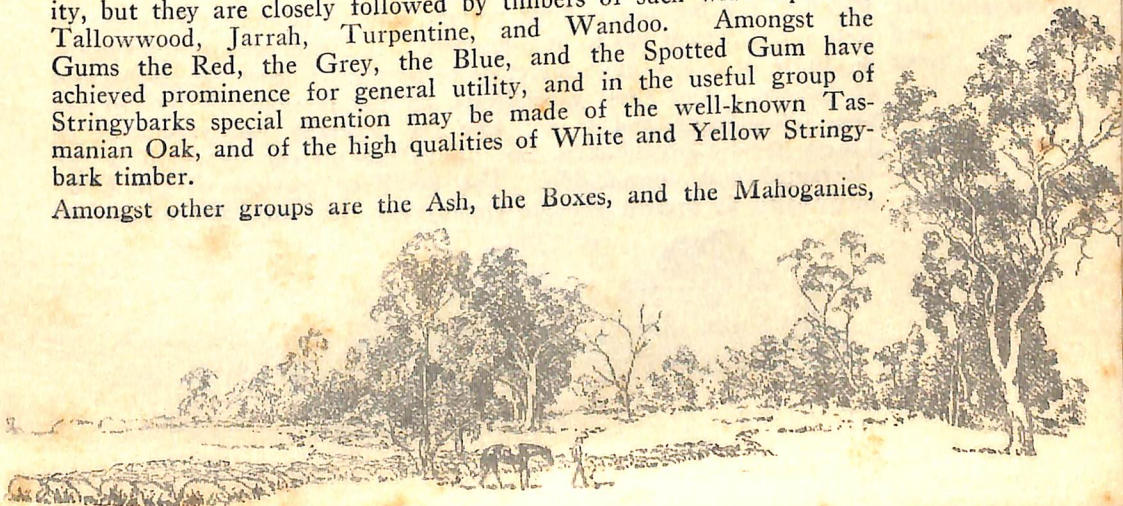
*Forest Types
and
Distribution*

In their distribution the finest and most extensive forests are found on the crests and slopes of the mountain ranges in the coastal hinterlands on the east, the south-eastern, and the south-western sides of the Continent, and also in the higher altitudes within reach of coastal humidity in the States of New South Wales, Victoria, and Tasmania. In the south-west, in addition to the vegetation between the mountains and the sea, a large area of forest stretches inland from the coastal ranges. The hills encircling Adelaide and the York and Eyre peninsulas also bear good forests, and Jungle forests exist in various parts of the north-western and extreme northern coastal regions. As the drier central region of the Continent is approached, tree vegetation gradually thins out and eventually disappears.

An alphabetical list of the principal timber trees and their uses is furnished in the appendix. Their qualities are so many and varied that it would be invidious to attempt to deal with them in any order of merit, but a brief reference to them under groups, or individually, will be of interest. Taking the hardwoods first, there are 35 kinds of sufficient importance to be mentioned. These are more or less of value for building and construction purposes. The Ironbarks are generally regarded as of first importance for strength and durability, but they are closely followed by timbers of such wide repute as Tallowwood, Jarrah, Turpentine, and Wandoo. Amongst the Gums the Red, the Grey, the Blue, and the Spotted Gum have achieved prominence for general utility, and in the useful group of Stringybarks special mention may be made of the well-known Tasmanian Oak, and of the high qualities of White and Yellow Stringybark timber.

*Principal
Timber
Trees*

Amongst other groups are the Ash, the Boxes, and the Mahoganies,





AUSTRALIAN TIMBERS

which yield useful woods; nor should omission be made of such individual trees of value as Blackbutt, Karri, Tuart, and Wollybutt.

In soft and ornamental woods 26 timber trees are listed. These include several pines, the most important of which are the Hoop, the Bunya, the Kauri, and the Cypress, all of particular value for either building or manufacture. The Beech, the Bean, and the Silky Oak groups, which supply timber of value for art and ornamental purposes, should also be mentioned; and such individual timbers as Tasmanian Blackwood and Red Cedar, which are among the finest in the world for cabinet ware; Queensland Maple, unexcelled for joinery and decorative work; and Coachwood, Myrtle, Myall, Rosewood, and Black Walnut, of high value for ornamental work and a variety of other purposes.

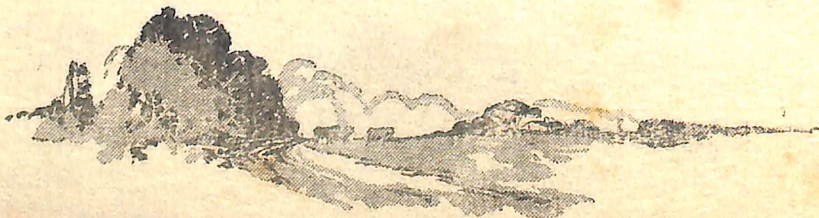
Without exaggeration it can be said that in variety of useful woods Australia is one of the most richly endowed countries in the world.

Policy and Legislation

The Australian system of Forestry is paternal, and under the administration of the various State Governments, there being practically no private or communally managed forests in the Commonwealth. The subject is governed by a number of Legislative enactments, providing for the policy and methods of administration, and, except in the cases of New South Wales and Victoria, where forest management is under Commission, the responsibility for administration is vested in Ministers of the Crown. The general scheme of legislation provides for the appropriation of forest land for forestry purposes, for the appointment of Conservators or Directors, and for the definition of powers and working principles. The aim of conservation is practically the same in each State, but the methods differ somewhat in detail. To a very considerable extent Australian Forestry is influenced by provincial considerations, but public thought on the question is tending more and more to the view that Forestry should be handled as a matter of national concern.

Administration and Finance

Forestry is a business of long periods, and in practice the future as well as the present has to be considered. A liberal and continuous expenditure of money must therefore be arranged; hence the importance of finance. Australian expenditure on its development has so far been insignificant, and in any case the generally backward state of Forest Service organisation has, up to the present, rendered it unwarranted and unprofitable. The combined services of the Commonwealth at present provide employment for only 350 officials of



GREATEST IN VARIETY AND USEFULNESS.

all grades, and, with a gross annual revenue of £390,000, only about £173,000 yearly is directly expended on the forests and forest works. The financial provision for expenditure on forest development is generally inadequate, and furthermore largely dependent upon Parliamentary appropriations, only two of the States—New South Wales and Victoria—having made any statutory provision to that end. The principle embodied in legislation in these two States is a novel one, and constitutes a marked advance upon forest legislation in any other part of the world. It recognises the need for continuous expenditure, and provides for it by earmarking a percentage of the forest earnings, thus creating a fund which is permanently available for the financing of forest works. It has enabled these States to launch progressive policies of development, which have produced more practical results in five years, than had been effected by 30 years of prior spasmodic effort when total dependency upon the Government was inevitable.

Conservation is directed to the protection and wise use of the native forest resources, and the endeavour to secure a natural regeneration of young crops after the matured growths have been utilised. Fortunately the Eucalypts have a pronounced habit of reproduction, and the aim of management is to foster this by silvicultural treatment of depleted areas, and their subsequent protection from damage by fire, over-grazing, and other factors inimical to the progress of young timber trees. The extent to which this is practised differs materially under the various State systems, some of them having greater natural advantages and being more advanced in their methods than others. Probably the States that have made most systematic progress are New South Wales and Victoria, in which the survey, organisation and progressive management of the native forests under definite working plans are consistently practised. Most of the other States are, however, now giving greater attention to the subject.

Australian forests are mainly of the hardwood variety, and there is a distinct shortage of coniferous softwood among our natural resources. In the sub-tropical regions of Queensland and northern New South Wales large supplies of softwood at one time existed, but much of this wealth has been destroyed to promote the dairying industry. This shortage of softwood is reflected in the imports of that commodity, which prior to the war were heavy, and are again steadily growing; the only remedy for it is planting. In many parts of the Continent are to be found both physical and climatic conditions suitable for the growth of high-class softwood timber, and a policy of afforestation has already been launched in several of the States. This





150 MILLION CUBIC FEET

has been furthest advanced in South Australia and Victoria, which had never been naturally endowed with softwood supplies; and it is now supplemented by extensive planting in the State of New South Wales. At the present time a total of 35,000 acres of plantations have been laid down in the Commonwealth, and this is being increased at the rate of about 4,000 acres a year. For national safety and the provision of its own future needs Australia requires at least 500,000 acres of well-managed softwood forests, and this must be secured, either by preserving the natural softwood areas that remain, or by the more costly method of establishing plantations.

Production and Consumption In their present undeveloped state the production of Australian forests is low compared with that of the intensively managed forests of other countries, and on the average their present output would not exceed 400 cubic feet of matured timber per acre, with an annual increment of 10 cubic feet per acre per annum. Under scientific management this can be at least doubled, and probably trebled. Generally speaking, present demand has not necessitated exploitation in excess of this output, and as the native forests are being gradually brought under management there need be no present fear of a shortage of hardwood.

Available statistics of the gross production of raw timber are not absolutely reliable, as some of the States do not completely record it, but it can be accepted as somewhere in the vicinity of 120 million cubic feet annually, with an approximate value of 5 million pounds at the place of preparation. Quite forty per cent. of this is subsequently converted into sawn timber. A small proportion of this production is exported to other lands, but even the balance is insufficient to provide for local needs, as a softwood shortage has to be supplemented by import. The excess of import over export, plus the gross figures of production, therefore represents the local consumption of timber, which from the latest figures is approximately 129 $\frac{1}{4}$ million cubic feet annually, or roundly 24 cubic feet per unit of population.

Import and Export The wood imported to Australia, both in the raw and in manufactured form, is almost wholly softwood, which emphasises the shortage in the home-grown commodity. The principal sources of this supply are Canada, the United States of America, and the Baltic provinces of Europe, and it is mainly used for flooring, linings, roof-framing, and appurtenances in house-building; for framing, scaffolding, and casing; and in the manufactures of the cheaper kinds of furniture. The quantity so imported fluctuates considerably, and is governed



AUSTRALIA'S ANNUAL PRODUCTION



to a large extent by the ruling oversea freights and local conditions of prosperity, New South Wales and Victoria—the most populated States of the Commonwealth—creating the largest demands. According to the latest figures, the annual volume of import is about 20 million cubic feet, which together with manufactures represents a value of about two and a half million pounds.

Only two of the States (New South Wales and Western Australia) figure materially in the export of local hardwood timber, and this was negligible during the war owing to shipping difficulties and high freights; but it is now growing again. Western Australia also exports considerable quantities of Sandalwood to China and other Eastern countries. The latest figures of export show a volume of $10\frac{3}{4}$ million cubic feet annually, with a value of £890,000.

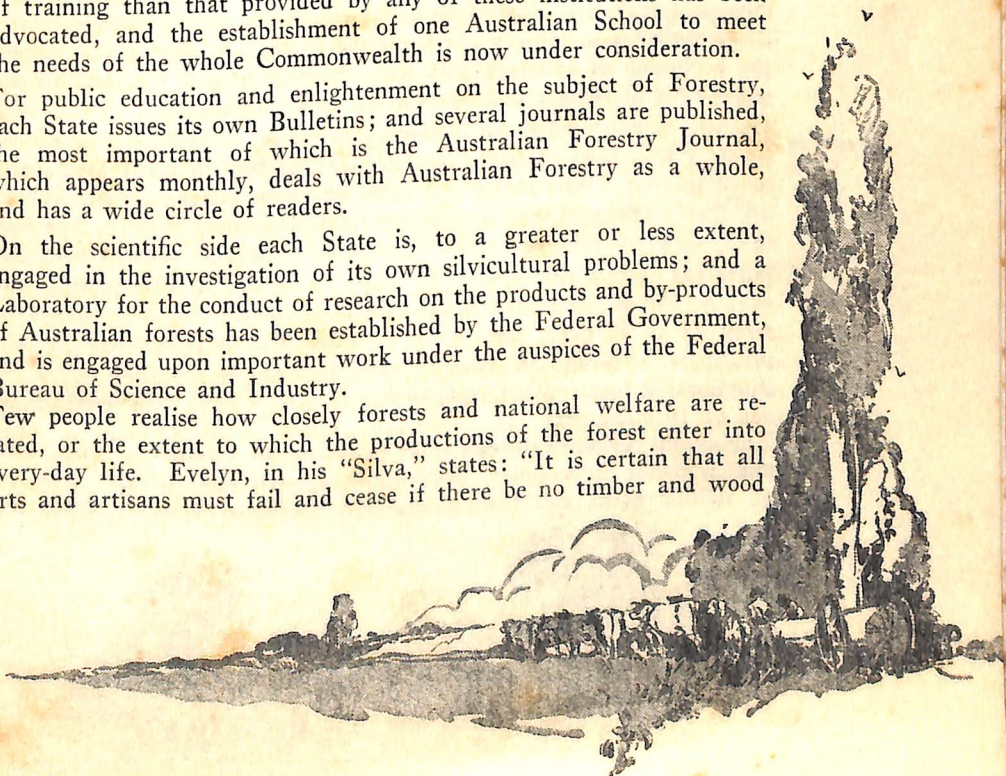
For the education and training of Australian students in the practice of Forestry the following facilities exist:—A diploma course of three years in association with the University of Adelaide; a two years' course of instruction by lectures, with one year's field training, in a Forest School established by the Forestry Commission at Narara, N.S.W.; a School for the training of apprentices under the control of the Forestry Commission, at Creswick, in Victoria; and a similar school under the control of the Conservator of Forests, at Ludlow, in Western Australia. The necessity for a more comprehensive system of training than that provided by any of these institutions has been advocated, and the establishment of one Australian School to meet the needs of the whole Commonwealth is now under consideration.

*Educational and
Scientific*

For public education and enlightenment on the subject of Forestry, each State issues its own Bulletins; and several journals are published, the most important of which is the Australian Forestry Journal, which appears monthly, deals with Australian Forestry as a whole, and has a wide circle of readers.

On the scientific side each State is, to a greater or less extent, engaged in the investigation of its own silvicultural problems; and a Laboratory for the conduct of research on the products and by-products of Australian forests has been established by the Federal Government, and is engaged upon important work under the auspices of the Federal Bureau of Science and Industry.

Few people realise how closely forests and national welfare are related, or the extent to which the productions of the forest enter into every-day life. Evelyn, in his "Silva," states: "It is certain that all arts and artisans must fail and cease if there be no timber and wood



A NATION MISUSING ITS FOREST WEALTH

in a nation;" and in the history of civilization there are numerous instances of the decay of such, following upon the destruction of the forests. An American writer has tersely enunciated that wood as a commodity enters into every phase of life from the cradle to the coffin, and is just as essential to human existence as bread. In natural phenomena forests are the universal providers of human needs, and the main source of the raw material which enables civilization to progress. It is almost impossible to mention any industry which is not directly or indirectly dependent upon timber production, and if the Earth was devoid of forests, Agriculture, Art, Education, Manufacture, Transport, Construction, Invention, Comfort, and even Health would be affected, for wood and its by-products are fundamentally necessary in the furtherance of each. Even in the defence of life and liberty forests play their part, for it is now admitted that the Allied Nations could not have won the great war had it not been for the tactical importance of and the material so freely given and obtained from, the splendid forests of France. Quite apart from their economic value forests constitute an appreciable factor in the mellowing of climate and temperature; in the conservation and regulation of water flow; and in the distribution of rainfall; in which directions they exercise a material benefit to both human health and soil production. As sanctuaries and breeding grounds for birds and game they also do much in upholding the balance of Nature, because predatory animals are inimical to the increase of vermin, and feathered life constitutes so large a check on the spread of insect pests. From the beginning of existence they have fostered human life, and to the end they will remain the mainstay of civilization.

*Forestry in
Other
Lands*

For comparison, and as an indication of future possibilities in development, a few facts upon the practice of Forestry in other lands may be of interest. The oldest and most advanced systems of the World are the Continental, and any information concerning them is therefore of the greatest relative value. Lotbiniere, a statistical writer of repute, has shown that under 75 years of intensive management, the average annual increment of the German forests has been increased from 24 to 50 cubic feet per acre, while the mean average for the principal European countries is now as high as 40 cubic feet; an illuminating figure when compared with the present Australian average of 10 cubic feet.

Taking the German forests once more, as an example of industrial and economic importance, these—both Crown and private—embrace 35 million acres, and their production has been so highly developed



A SPENDTHRIFT LIVING ON HIS CAPITAL

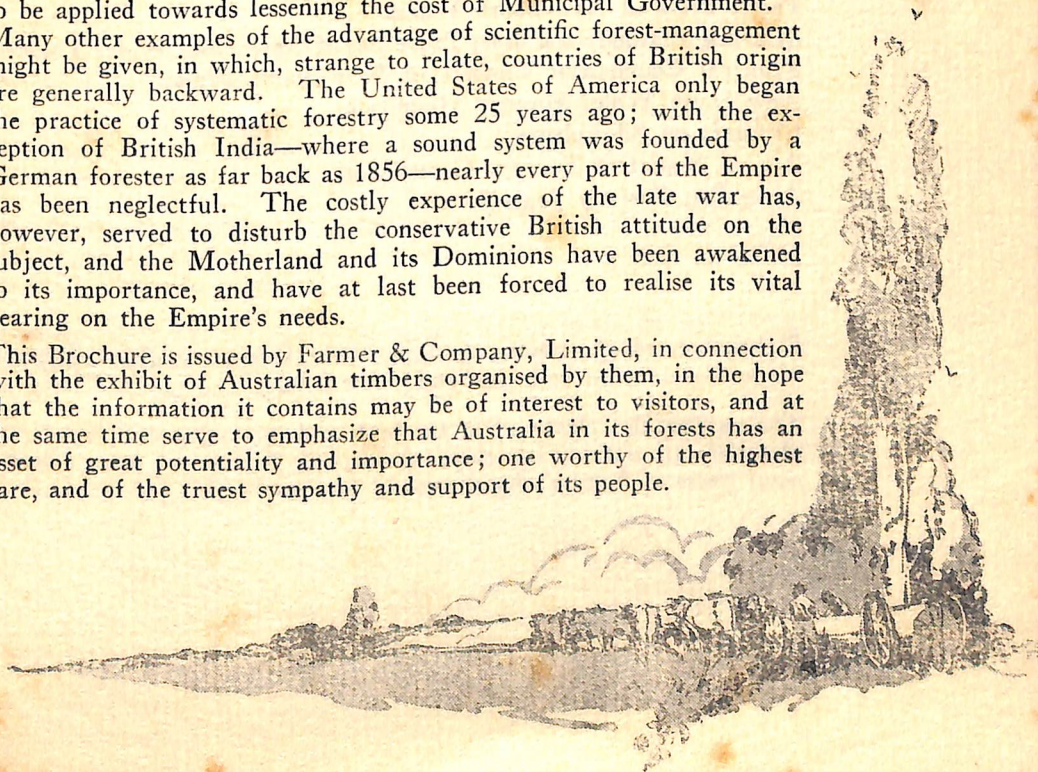
that they are able to supply 90 per cent. of the wood requirements of the German nation, and to provide direct employment for three millions of people in their management and in allied forest-industries. Published figures disclose that before the war the annual expenditure on the Crown forests of Germany—which include about 50 per cent. of that country's total forest area—amounted to five million pounds sterling, while the returns from the same reached 21 million pounds gross, or 16 million pounds net.

Prior to the war—in which they were greatly devastated—the forests of France embraced about 24 million acres, 31 per cent. of which were Crown or communal forests owned by the people. These public forests yielded produce to the value of $2\frac{1}{4}$ million pounds annually, and in their management, and in forest-industries, provided direct employment for 700,000 French people. Under skilled management the gross production of the public and private forests of France very nearly supplied the whole of the wood requirements of the nation.

One of the most striking examples of effective management is that provided by the communal forest at Zurich, in Switzerland, which has been more or less under scientific control for 500 years. This small forest of 2,800 acres has been brought to such a high state of production that its annual increment by growth alone supplies practically the whole of the fuel and other wood requirements of the city, at the same time providing a revenue of 33/- per acre per annum to be applied towards lessening the cost of Municipal Government.

Many other examples of the advantage of scientific forest-management might be given, in which, strange to relate, countries of British origin are generally backward. The United States of America only began the practice of systematic forestry some 25 years ago; with the exception of British India—where a sound system was founded by a German forester as far back as 1856—nearly every part of the Empire has been neglectful. The costly experience of the late war has, however, served to disturb the conservative British attitude on the subject, and the Motherland and its Dominions have been awakened to its importance, and have at last been forced to realise its vital bearing on the Empire's needs.

This Brochure is issued by Farmer & Company, Limited, in connection with the exhibit of Australian timbers organised by them, in the hope that the information it contains may be of interest to visitors, and at the same time serve to emphasize that Australia in its forests has an asset of great potentiality and importance; one worthy of the highest care, and of the truest sympathy and support of its people.



FORESTRY STATISTICS OF N. S. W.

General Figures.

Population	2,138,000	
Territorial Area	198,059,000	acres
Total Forest Area	11,000,000	acres
Reserved Forest Area	6,851,780	acres
Area of Forest under Working Plans	1,027,000	acres
Area of Softwood Plantations established	3,736	acres
Annual Forest Revenue	£217,840	
Annual Expenditure on Forest Works	99,950	

Utilization Figures.

Raw timber import (annual), 9,185,420 cub. ft., value	£1,457,500
Raw timber export (annual), 1,699,830 cub. ft., value	352,900
Sawmill plants 500 in number, value	1,720,000
Annual Sawmill output of native Timber, 13,009,250 cubic feet	
Number of persons partially or wholly employed in timber industry	12,260
Gross annual consumption of timber	29,744,300 cubic feet

Forestry Publications.

Forest Flora of New South Wales.
 Strength, Elasticity and other Properties of New South Wales Timbers.
 Principal Commercial Timbers of New South Wales.
 New South Wales Forestry Handbook.
 Chapters on Silviculture.
 Annual Report of Forestry Commission.
 Australian Forestry Journal.

Rightly treated, the timber resources of the Commonwealth will prove of inestimable value both now and in the future.

The unscientific "clearing" of the bush and its consequent denudation of timber are nothing less than calamitous. In one day man destroys many years of Nature's handiwork.

FORESTRY STATISTICS OF VICTORIA

General Figures.

Population of State at last Census	1,550,952
Area of forest under working plans	Nil, plans are in preparation.
Area of Softwood plantations established	7,600 acres.
Annual forest revenue	£155,160, year 1921/22.
Annual forest expenditure	£130,076, year 1921/22.
Raw timber import, 54,187,501 super ft. Value	£567,572, year 1921/22
Raw timber export	253,337 super ft. Value £5,572, year 1921/22.
Sawmill plants	246 mills. Value £473,275, year 1920/21.
Annual sawmill output of native timber	113,215,000 super ft.
Value	£905,720, year 1920/21
Number of persons partially or wholly employed in timber industry—	
Establishments, 580. Persons employed, 9429, year 1920/21.	
Gross annual consumption of Timber	167,655,838 super ft. approx.

Publications—

“Forestry in Victoria,” by H. Mackay.

“Paper Pulp from Victorian Woods.”

“Don’ts for People with regard to Forests.”

Nature is patient and long-suffering; but when her gifts are constantly spurned and wasted, she ceases at length to offer them.

Leave we a heritage of forest wealth to our children, and assuredly they will profit by our example and do likewise—to the everlasting benefit of our country.

The short-sighted policy of indiscriminately hewing down our forest resources may result in temporary profit. But it is preparing another burden for posterity to shoulder.

Have we the broader vision, or do we live wholly in the present? One generation suffices to produce a bountiful crop of timber. Shall we sow that our sons may reap?

When the prospect of gain is immediate, the word is shouted from the housetops. A project that will bring vaster benefits, but in the future, meets a conspiracy of silence and indifference.

FORESTRY STATISTICS OF WEST AUSTRALIA

(1)	Population of State last Census (4/9/21)	332,213
	Population of State at 30/6/22	339,501
(2)	Area of forest under working plans (work commenced 1921); acres	165,024
(3)	Area of Softwood plantations established (Pinus pinaster only); acres	400
(4)	Annual forest revenue (year ended 30/6/22).. ..	£88,530
(5)	Annual forest expenditure (year ended 30/6/22)	47,886
(6)	Prime forest area only:—	
	(a) Jarrah, 1,196,650 acres, averaging 300 cubic feet to acre (square timber)	
	(b) Karri, 150,000 acres, averaging 2,500 cubic feet to acre (square timber)	
	(c) Tuart, 6,091 acres, averaging 245 cubic feet to acre (square timber)	
(8)	Forest areas suitable afforestation treatment, 1,352,741 acres, Composed of Virgin forest	907,591 acres
	Composed of Cut-over forest.. .. .	445,150 acres
		1,352,741 acres
(9)	Sawmills, number of persons engaged, year ended 31/12/21	4,687
(10)	Raw timber imported, year ended 30/6/22, value	£92,448
(11)	Raw timber exported, year ended 30/6/22, 8,309,750 cub. ft.	
(12)	Sawmill plants, year ended 30/6/22, 116 in number.	
(13)	Annual sawmill output of native Timber, year ended 30/6/22	11,518,300 cub. ft.
(14)	Number of persons partially or wholly employed in the timber industry, year ended 30/6/22	10,166
(15)	Gross annual consumption of timber ..	6,830,850 cub. ft.

Opportunity is only a matter of habit. It awaits the right man and the right policy. A great prosperity inevitably follows enlightenment.

Ignorance and apathy are akin; so are knowledge and action. This Exhibition, conceived of public spiritedness, cradled in a belief in the destiny of the Commonwealth, declaims the need for clearer thinking and wiser action with regard to our natural assets.

FORESTRY STATISTICS OF QUEENSLAND

General Figures.

Population (1920)	752,245	
Territorial Area (square miles)	670,500	
Total Forest Area	24,000,000	acres
Reserved Forest Area	4,196,798	acres
Area of Plantations established	1,058	acres
Annual Forest Revenue (1921)	£137,240	
Annual Forest Expenditure	£125,189	

Utilization Figures.

Raw timber import (oversea 1920-1921), value	£14,050
Raw timber export (oversea 1920-1921), value	5,780
Sawmill plants, 239 in number, value	818,814
Seasoning plants, 3 in number	
Annual sawmill output of native Timber,	
112,987,290 super feet	£2,005,052
168,857 sleepers	30,518
Number of persons partially or wholly employed	
in timber industry	3,958

Forestry Publications.

An Australian Study of American Forestry.
The Structure and Identification of Queensland Timbers.
Notes on the Principal Timbers of Queensland.
Silvicultural Notes on Forest Trees of Queensland.
A Note on "Dundathu" Kauri (*Agathis robusta*).
Forestry or Farming or Both.

Nature destroys only to improve; man destroys wantonly, with no thought for good or evil. To fell timber without a purpose borders on a crime.

Everything has its part and purpose in Nature. The isolated dwarf tree in the plain and the monarch of the forest share this attribute—that each is of potential use to man.

FORESTRY STATISTICS OF TASMANIA

General Figures.

Population	213,877	
Territorial Area	16,778,900	acres
Total Forest Area	9,000,000	acres
Reserved Forest Area	1,672,000	acres

Of this area 14,040 acres are dedicated as State Forests.

Area of Forest under working plans Nil
Commencement has, however, been made towards preparation of
working plans for all State Forests.

Area of Softwood Plantations established 108 acres

Two Forest Nurseries have been established, and planting will proceed annually.

Annual Forest Revenue	£18,891
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Annual Forest Revenue	218,871
Annual Expenditure on Forest Works	7,069

Utilization Figures.

Raw timber import (annual), 54,465 cubic ft., value .. £6,965

Raw timber export (annual), 368,052 cubic ft., value ..	51,458
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Sawmill plants, 213 in number.

Annual sawmill output of native Timbers . . . 455,598 cubic feet

Number of persons partially or wholly employed in

timber industry	1,765
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Gross annual consumption of timber	5,259,022, cubic feet
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Forest Publications.

Tasmanian Forestry.

Timber Products and Sawmilling Industry.

Annual Reports to Parliament by Conservator.

The statistics of the States of the Commonwealth were officially supplied by the Forestry Departments of the various State Governments.



APPENDIX.

List of Principal Commercial Timber Trees.

I. HARDWOODS.

Common Name.	Botanical Designation.	States Indigenous to.	Principal Uses.
Ash, Alpine	<i>E. gigantea</i>	N.S.W., Tas.	Building, furniture, implement frames, and handles.
Ash, Mountain	<i>E. regnans</i>	Vic., Tas.	
Ash, Red	<i>E. delegatensis</i>	Vic.	
Blackbutt	<i>E. pilularis</i>	N.S.W., Vic., Qld.	Building, framing, sleepers, poles
Bloodwood	<i>E. corymbosa</i>	N.S.W., Vic., Qld.	Posts, poles, groundwork
Box, Brush	<i>Tristania conferta</i>	N.S.W., Qld.	Decking, paving, tool handles
Box, Grey	<i>E. hemiphloia</i>	N.S.W., Vic., S.A.	Sleepers, girders, poles, posts.
Box, Red	<i>E. polyanthemos</i>	N.S.W.	Building, posts, poles, groundwork
Gum, Forest Red	<i>E. tereticornis</i>	N.S.W., Vic.	Building, naves, felloes, posts
Gum, Grey	<i>E. punctata et propinqua</i>	N.S.W., Qld.	Girders, sleepers, posts, poles
Gum, Murray Red	<i>E. rostrata</i>	N.S.W., Vic., S.A.	Building, construction, girders
Gum, Mountain	<i>E. goniocalyx</i>	N.S.W., Vic.	Sleepers, decking, piles, shafts
Gum, Manna	<i>E. viminalis</i>	S.A.	Building, posts, fencing
Gum, Spotted	<i>E. maculata</i>	N.S.W., Qld.	Building, framing, coachwork, wheelwrighting.
Gum, Sydney Blue	<i>E. saligna</i>	N.S.W., Qld.	Building, ship and wheelwrighting, paving, felloes
Gum, Salmon	<i>E. salmonophloia</i>	W.A.	Underground mining work
Gum, Tasmanian Blue	<i>E. globulus</i>	Vic., Tas.	Sleepers, decking, piles, shafts, etc.
Ironbark, Grey	<i>E. paniculata</i>	N.S.W., Qld.	Bridge, wharf, and other construction, girders, sleepers, piles, poles, posts, naves, felloes, and purposes requiring great strength
Ironbark, Red	<i>E. siderophloia</i>	N.S.W., Qld.	
	<i>E. crebra</i>	N.S.W., Qld.	
	<i>E. sideroxylon</i>	N.S.W., Vic.	
Ironbark, White	<i>E. leucoxylon</i>	Vic., S.A.	
Jarrah	<i>E. marginata</i>	W.A.	Building, piles, furniture, poles

HARDWOODS—continued.

Common Name.	Botanical Designation.	States Indigenous to.	Principal Uses.
Karri	<i>E. diversicolor</i>	W.A.	Building, framing, lining, wood pipes, telegraph arms
Mahogany, Red	<i>E. resinifera</i>	N.S.W., Qld.	Weather-boarding, paving, turnery, and heavy furniture
Mahogany, White	<i>E. acmenioides</i>	N.S.W., Qld.	Building, posts, piles, sleepers, girders and ground work
Messmate	<i>E. obliqua</i>	N.S.W., Vic.	Building, sleepers, posts
Stringy Bark, Brown	<i>E. capitellata</i>	N.S.W., Vic. } S.A.	Building, posts, poles
Stringy Bark, Red			
Stringy Bark, Tasmanian	<i>E. obliqua</i> (<i>L. Herit.</i>)	Tas., S.A.	Building, construction, piles, furniture, sleepers
Tasmanian Oak			
Stringy Bark, White	<i>E. eugenioides</i>	N.S.W.	Building, posts, poles and sleepers
Stringy Bark, Yellow	<i>E. Muelleriana</i>	N.S.W., Vic.	
Tallowwood	<i>E. microcorys</i>	N.S.W., Qld.	Flooring, decking, building, framing, sleepers, girders
Turpentine	<i>Syncarpia laurifolia</i>	N.S.W., Qld.	Wharfing, piles, posts, sleepers
Tuart	<i>E. gomphocephala</i>	W.A.	Wheelwrighting, naves, railway waggons and trucks
Wandoo	<i>E. redunca</i> var. <i>elata</i>	W.A.	Wheelwrighting, ship-building, waggon scantling, railway trucks
Woolly Butt	<i>E. longifolia</i>	N.S.W.	Building, posts, poles, sleepers

II. SOFT AND ORNAMENTAL WOODS.

Bean, Black	<i>Castanospermum australe</i>	N.S.W., Qld.	Cabinetwork, furniture, staves
Bean, Red	<i>Dysoxylon Muel-leri</i>	N.S.W.	Building, furniture, cabinetwork
Beech, Brown	<i>Litsea reticulata</i>	N.S.W., Qld.	Lining, boxes, casks, wood carving
Beech, Evergreen	<i>Fagus Cunninghamii</i>	Vic.	Furniture, joinery, picture frames, wood carving
Beech, White	<i>Gmelina Leichhardtii</i>	N.S.W.	Flooring, ship decking, picture frames, wood carving

II. SOFT AND ORNAMENTAL WOODS—continued.

Common Name.	Botanical Designation.	States Indigenous to.	Principal Uses.
Blackwood, Tasmanian	<i>Acacia melanoxylon</i>	Tas., Vic.	High-class furniture, cabinet work, panelling, picture frames, gun stocks
Cedar, Red	<i>Cedrela australis</i>	N.S.W., Qld.	Furniture, house-joinery, cabinetware
Coachwood	<i>Ceratopetalum apetalum</i>	N.S.W.	Coach and boat building, carpentry, joinery, cabinetware, box making
Cudgerie	<i>Flindersia Schottiana</i>	N.S.W.	Furniture, flooring, building
Maple, Queensland	<i>Flindersia Chatawaiana</i>	Qld.	Building, cabinetware, framing, panelling, gun stocks
Myrtle	<i>Fagus Cunninghamii</i>	Tas.	Bent-wood frames, wood carving, panelling, furniture
Musk	<i>Olearia argophylla</i>	Tas.	Veneers, inlaying and artistic work
Myall	<i>Acacia pendula</i>	N.S.W., Qld.	Turnery, panelling, ornamental articles
Oak, Silky	<i>Grevillia robusta</i>	Qld., N.S.W.	Casks, staves, furniture, panelling, picture framing
Oak, Red Silky	<i>Stenocarpus salignus</i>	N.S.W.	Furniture, veneers, panels, gun stocks, picture frames
Pine, Bunya	<i>Araucaria Bidwilli</i>	Qld.	House and boat building, cases, shelving
Pine, Cypress	<i>Callitris species</i>	N.S.W., Qld., S.A.	Building, flooring, house blocks, poles, fencing
Pine, Hoop	<i>Araucaria Cunninghamii</i>	Qld., N.S.W.	Flooring, lining, building, shelving, butter boxes, cases
Pine, Huon	<i>Dacrydium Franklinii</i>	Tas.	Boat building, joinery, furniture
Pine, Kauri	<i>Agathis Palmerstoni</i>	Qld.	Cabinet work, panelling, framing, boat building
Pine, King William	<i>Athrotaxis selaginoides</i>	Tas.	Cabinet work, joinery, furniture, house fittings
Rosewood	<i>Dysoxylon Frasierianum</i>	N.S.W., Qld.	Furniture, cabinet work, panelling, wood carving, engraving
Sassafras	<i>Doryphora sassafras</i>	N.S.W., Vic.	Lining, ceilings, case and box making
Sandalwood	<i>Santalum cygnorum</i>	W.A.	Distillation of essential oil, manufacture of incense, ornamental articles
Teak, Colonial	<i>Flindersia australis</i>	N.S.W., Qld.	Building, flooring, slabbing, gearing wheels
Walnut, Black	<i>Cryptocaria Palmerstoni</i>	Qld.	Cabinet work, turnery



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